# Section 7. Terms of Reference

**Türkiye**

**Disaster-Resilient Health Infrastructure Development Project**

**Consultancy Services for the Reconstruction Site Supervision of Fatih Sultan Mehmet Training & Research Hospital**

**(ISDB2-CB1)**

1. **INTRODUCTION AND BACKGROUND**
   1. Türkiye is highly vulnerable to natural disasters, particularly earthquakes. In the 1999 Marmara earthquakes, the death toll reached over 17,000 with a direct economic impact estimated at about US$5 billion, or around 2.5 percent of GNP. Within the nation’s high-risk context, Istanbul is most vulnerable because of its seismic-prone location on the North Anatolian Fault, and its high population and commercial/industrial densities. According to recent assessments, the probability of a major earthquake affecting Istanbul in the next 30 years is 62%±12%, while the likelihood of such devastation in the next decade is 32%±12%. If a seismic event of the same magnitude as that in 1999 were to occur near Istanbul, the human suffering as well as the social, economic, and environmental impacts would be dramatically higher than in the Marmara region, as Istanbul is not only the financial, cultural and industrial centre of the country, but is also a nexus of inter-continental importance and home of about 15 million people. An interruption of Istanbul’s social, economic and financial life would be felt for many years to come. Some sources estimate that the economic impact of such a disaster would be more than US$20 billion.
   2. In order to improve the city of Istanbul’s preparedness for a potential earthquake through enhancing the institutional and technical capacity for disaster management and emergency response, strengthening critical public facilities for earthquake resistance, and supporting measures for better enforcement of building codes and land use plans, Istanbul Seismic Risk Mitigation and Emergency Preparedness (ISMEP) Project had been prepared by the Turkish Government. The International Bank for Reconstruction and Development (IBRD) and the Republic of Türkiye signed a Loan Agreement in the amount of Euro 310.00 million (US$400.00 million equivalent) on October 18, 2005 for the funding of ISMEP. The agreement became effective on February 3, 2006. Istanbul Special Provincial Administration, Istanbul Project Coordination Unit (IPCU) is responsible for the implementation of this project. According to the mission reports “Project implementation is progressing well and in accordance with the agreed plan.”

Since the budget allocated from the IBRD is not enough to cover all needed activities for the risk mitigation studies of Istanbul, the Republic of Türkiye signed an additional loan of an amount of 300.000.000 Euro with the European Investment Bank (EIB), 250.000.000 Euro with the Council of Europe Development Bank (CEB), 109.800.000 Euro with the International Bank for Reconstruction and Development (IBRD), 243.000.000 Euro with the Islamic Development Bank (IsDB), 300.000.000 Euro with the European Investment Bank (EIB), 250.000.000 Euro with the Council of Europe Development Bank (CEB), 250.000.000 Euro with the German Development Bank (KfW), 300.000.000 USD with the Asian Infrastructure Investment Bank (AIIB), 40.000.000 Euro with the ECO Trade and Development Bank (ETDB), 100.000.000 Euro with the Council of Europe Development Bank (CEB), 150.000.000 Euro with the Asian Infrastructure Investment Bank (AIIB), 55.000.000 USD with the Saudi Fund for Development (SFD), 140.000.000 Euro with the German Development Bank (KfW) and finally 300.000.000 Euro with the Asian Infrastructure Investment Bank (AIIB) to support financing of ISMEP activities.

ISMEP Project consists of: (A) Enhancement the effectiveness and capacity of the provincial and municipal public safety organizations in İstanbul to prepare for, respond to and recover from significant emergencies, those arising from earthquakes; (B) Seismic risk mitigation for priority public facilities to ensure their function and to reduce casualties in the event of earthquake through retrofitting of hospitals, schools and other priority public facilities; (C) Enforcement of building codes made in implementation of land use plans to strengthen the institutional and technical capacity of the Metropolitan Municipality and selected district municipalities.

The project shall, among other activities, finance the structural retrofitting of selected essential public services buildings, including consideration of non-structural elements in order to reduce their vulnerability to seismic forces and the consequent risks to occupants. Essential public services buildings include those that serve a public function essential to the disaster response and recovery operations of the community and to social and community function in general, as well as buildings regularly used by large numbers of the public, where life-safety is of special concern.

**2. OBJECTIVES**

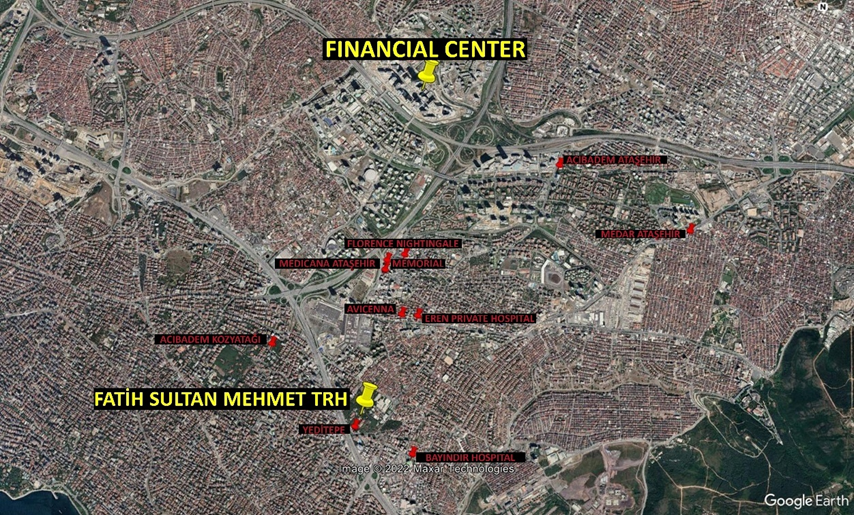
It is the area of Fatih Sultan Mehmet Training and Research Hospital located within the borders of Istanbul Province, Ataşehir District, İçerenköy neighborhood (on 173 map section, old 637, new 3130 city blocks, 146 parcels). It was previously affiliated to the General Directorate of Postal Operations of the Ministry of Transport. Then, with the gathering of public health institutions under one roof, it was transferred to the Ministry of Health on 19.02.2005. The total planning area is 18,0157 hectares.

Existing hospital currently serves a population of approximately 450,000. However, the population of the region will reach approximately 1,000,000 with the completion of the ongoing Financial Center Project and its affiliated institutions. As the picture below depicts, any other state hospital is not located in the current area. Since the existing residential areas are located on the seismic belt and it is essential to locate hospital in a central place in case of a possible earthquake or similar disaster and also having many other advantages in terms of land, air and sea transportation while being close to the Financial Center that is being established, it is an ideal location for a hospital.

Feasibility and retrofitting studies for existing Fatih Sultan Mehmet Training and Research Hospital has been conducted under the scope of ISMEP. According to the feasibility studies, this existing hospital complex was found infeasible for retrofitting since the existing structures are inadequate from the functional perspective and the buildings are in poor condition and require significant maintenance.

In other words, it is inevitable to plan a new hospital building on the existing land, since almost all of the existing buildings were built before 1999, accordingly it is infeasible for retrofitting and the existing hospital currently serves as a group of independent buildings within the area.

Consequently, the design for new Fatih Sultan Mehmet Training and Research Hospital has been conducted under the ISMEP project through the financing of Asian Infrastructure Investment Bank (AIIB).



*Image 1 The Site and Its Surrounding*

In the vicinity, any other area is not existed where a public hospital can be established, only about 40 acres of land within the field (approximately 184 acres) where the existing hospital is located is suitable in order to use for this purpose.

The most outstanding feature of the land is being the only grove in the region. The grove texture which is comprised of qualified trees, covers a large scale of the land, as partly dense and partly sparse.

As part of the project, a total of seven buildings will be constructed within the plot: the Main Hospital (MH), the Technical Service Building (TSB), the 99-Bed Additional Hospital Building (ADH), the Conference Hall Building (COF), two Entrance Control Point Buildings (GT), and the Embedded Water Tank (RWT).

The Main Hospital Building (MH) consists of 15 floors, including three basement floors, a lower ground floor, an upper ground floor, and a roof floor, making a total of 10 above-ground levels. The structural height (from the top of the foundation to the highest reinforced concrete slab) is 74.40 meters, while the building height is 52.00 meters. It is the only building in the project with seismic isolators, which are positioned at the B1 floor slab level.

The Technical Service Building (TSB) is designed to meet all the mechanical and electrical needs of the Main Hospital Building (MH). The building consists of three floors: two basement floors and a lower ground floor. The structural height (from the top of the foundation to the highest reinforced concrete slab) is 17.60 meters, while the building height is 14.00 meters. A technical gallery on the second basement floor connects it to the Main Hospital (MH) building.

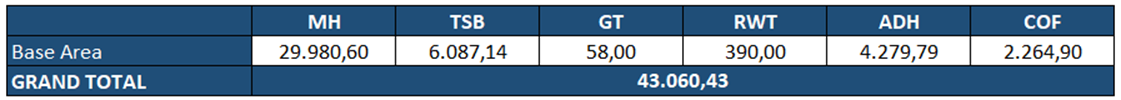
The Entrance Control Point Buildings (GT) are planned as two separate structures, which will be constructed towards the final stages of the project. These buildings are designed with steel structures on reinforced concrete foundations and consist of only a ground floor. The structural height (from the top of the foundation to the uppermost point of the steel support structure) is 6.20 meters, while the building height is 3.00 meters.

The Embedded Water Tank (RWT) is located at the western side of the site, near Entrance No. 1. The structural height of the tank is 6.00 meters.

The 99-Bed Additional Hospital Building (ADH) is the first structure to be constructed among the planned buildings. Due to the ongoing polyclinic operations within the construction area of the Main Hospital (MH) and Technical Service Building (TSB), the ADH has been prioritized for construction. As it needs to be built and operational in a short period, the structural system has been designed as a steel structure on a reinforced concrete foundation, instead of a conventional reinforced concrete system. The building consists of four floors (ground floor + three additional floors). The structural height (from the top of the reinforced concrete foundation to the uppermost steel slab) is 18.00 meters.

The Conference Hall Building (COF) will be the last building constructed within the project. It is designed as a hybrid structure, with both reinforced concrete and steel elements, and will have a capacity of 500 people. The building consists of a basement floor, a ground floor, and one upper floor. The roof level is planned as an event terrace. The roof structure is entirely designed as a steel system. The structural height of the building is 17.35 meters.

Please see below for the base areas of the buildings:



Please see below for the total sqms of the buildings:

A table with numbers and a number of people

AI-generated content may be incorrect.

The FSM Hospital project is planned to be completed in five years (including DLP period) and will be implemented in phases. During this process, different buildings will be constructed according to the construction schedule, ensuring that existing hospital services are not disrupted and can be transferred to new buildings right after the completion. The project consists of four main sections: the 99-Bed Additional Hospital Building (ADH), the Main Hospital Building (MH), the Technical Services Building (TSB), and the Conference Hall Building (COF). All buildings will be constructed in the open spaces within the hospital area (proper land areas for construction), ensuring that the transfer of the existing hospital will not require any suspension period.

The design of the Hospital meets the requirements and the specific functions of the units as well as the requirements of National and International Hospital Regulations and Rules built in Seismic Area. The future role of new Fatih Sultan Mehmet Training and Research Hospital is defined as a disaster centre, which should remain operational during an earthquake thus any specific supervision tasks resulting from this function shall be the Consultants responsibility for the supervision of construction works. The seismic design targets to cover the *“Operational Building”* performance level in DBE/DD-2 (Design Basis Earthquake) and *“Life Safety-* *Controlled Damaged* (*Kontrollü Hasar*)” performance level in MCE/DD-1 (Maximum Credible Earthquake) according to TBEC-2018 and ASCE/SEI 41-06. Thus, the structural system of the hospital is reinforced concrete and **the design covers seismic base isolators for an earthquake resistant hospital complex**.

The hospital will be equipped with high level of electromechanical infrastructure like building automation and energy saving features like tri-generation.

The Client intents to certify Fatih Sultan Mehmet Training and Research Hospital with the LEED certification (preferably LEED Gold) to the highest degree feasible.

**3. DESCRIPTION OF THE CONSULTANT’S DUTIES**

This Terms of Reference will cover the supervision of new Fatih Sultan Mehmet Training and Research Hospital including but not limited to the construction of the new hospital buildings having 1.300 beds and approximately 282.894,31m2 built-up area (3B+LG+G+10 Floor + Roof) of which 47.495,59 m2 is underground parking area and all related infrastructural works as well as demolishing of the old buildings.

The Consultant shall be responsible to carry out all the duties attributed to the *“Engineer”* within the *“Conditions of Contract”* of the Islamic Development Bank’s Standard *International Competitive Bidding (ICB)* documents.

*“Conditions of Contract”* of the Islamic Development Bank’s Standard *International Competitive Bidding (ICB)* documents refers to the “Construction Contract” and the *“Consultant”* refers to the *“Engineer”* within this document.

Consultant’s tasks are summarized as follows;

**3.1 GENERAL OBLIGATIONS AND TASKS OF THE CONSULTANT**

1. The Consultant staff shall include suitably qualified engineers and other professionals who are competent to carry out the duties described within this document to provide site supervision of the works and engineering services both during the Construction period and during the Defects Liability / Maintenance period.
2. The Consultant shall be responsible for the approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar acts as defined in the “Construction Contract” both during the construction period and for any works that have to be completed during the Maintenance/Defects Liability Period. The Consultant shall approve materials and application methodologies submitted by Contractor according to national and international standards and the “Construction Contract”.
3. Since other Consultants in other sites may also supervise the similar construction works, the Consultant shall co-operate with the other Consultants and join the meetings whenever required by the Client.
4. The Consultant shall take the necessary measures to ensure compliance with environmental, social, and health and safety (ESHS) regulations. In this regard, the **latest** Turkish environmental and safety regulations must be strictly followed, particularly during the supervision of construction works.

As part of its responsibilities, the Consultant shall oversee the daily implementation and monitoring of environmental, social, and occupational health and safety (OHS) mitigation measures. The Consultant shall report the progress and performance of sub-projects related to E&S to IPCU on a monthly basis.

**E&S Compliance and Monitoring Duties**

* Ensure that contractors fully comply with national labor laws, project-specific Environmental and Social Management Plans (ESMPs), and relevant E&S sub-management plans throughout project implementation.
* Maintain one Occupational Health and Safety (OHS) Specialist and one Environmental and Social (E&S) Specialist with relevant certification and/or experience to oversee E&S management.
* Conduct weekly site inspections and audits to assess contractors' adherence to E&S mitigation measures, and provide monthly reports detailing performance, compliance issues, and corrective actions.
* Review and approve Contractor’s Environmental and Social Management Plan (C-ESMP), Labor Management Plan (LMP), and E&S sub-management plans submitted by contractors. These documents must be submitted to IPCU within five (5) business days.
* If deficiencies or non-compliances are identified by IPCU, the Consultant shall communicate these issues to the contractor, who must rectify them within fifteen (15) business days.

**Labor Management Plan (LMP) Compliance and Oversight**

* Verify that Contractors’ Labor Management Plans (C-LMPs) and OHS Plans align with the project LMP and national labor laws before implementation.
* Monitor contractors’ adherence to labor management and OHS plans throughout project execution, ensuring full compliance.
* Ensure that the Workers’ Grievance Mechanism (WGM) includes specific provisions for SEA/SH complaints and that relevant personnel are trained in survivor-centered approaches.
* Supervise contractor training programs to ensure that SEA/SH prevention, OHS compliance, and E&S standards are effectively implemented.
* Monitor the implementation and effectiveness of the Workers’ Grievance Mechanism (WGM) across all worksite.
* Ensure that grievance submission channels are available and accessible to all workers, including marginalized groups.
* Review and report grievances, including SEA/SH-related complaints, and ensure proper recording and timely resolution.
* Provide monthly reports to IPCU summarizing labor and OHS compliance, performance, and key grievance trends.
* Recommend corrective actions to IPCU in cases of non-compliance and provide ongoing feedback on grievance trends and necessary interventions.

**Stakeholder Engagement Plan (SEP) Implementation and Monitoring**

* Ensure that the project complies with the methodology and requirements outlined in E&S documents (ESMP, OHSP, SEP) throughout sub-project implementation.
* Monitor contractors’ activities on-site, including grievance recording, resolution processes, and timely reporting to IPCU in monthly progress reports.
* Coordinate with IPCU Grievance Mechanism (GM) Focal Points for grievance resolution and follow-up.
* Conduct on-site training sessions on Environmental, Social, and Occupational Health and Safety (OHS) aspects to ensure all personnel understand project requirements and compliance measures.
* Provide specialized training on Gender-Based Violence (GBV) prevention and response to foster a safe and inclusive working environment.

**Serious E&S Incidents Reporting**

* The Consultant must immediately inform IPCU about any serious E&S incidents (including OHS-related incidents).
* If a critical environmental or social risk is identified, IPCU will ensure it is addressed through remedial actions, mitigation measures, and compliance tracking.
* If an incident has significant adverse effects on the environment, affected communities, workers, or public safety, submit an incident investigation report with root-cause analysis and corrective actions within 10 days.
* Fatalities, child or forced labor, GBV/SEA/SH-related incidents, violent community protests, or kidnappings are automatically classified as serious incidents and require immediate action.

Environmental management details and the responsibilities of the "Engineer" shall also be detailed in the Contractor's contract. The Consultant shall be responsible for the relevant supervision and instruction of the applications to the Contractor, ensuring full compliance with all E&S requirements throughout the project lifecycle.

*The details of the Environmental and Social (E&S) obligations defined in this section should be evaluated in alignment with the documents available at* [*IPCU's official repository on Environmental and Social Management*](https://www.ipkb.gov.tr/e-kutuphane-kategorisi/cevresel-ve-sosyal-yonetim/)*, ensuring that all prepared plans adhere to the referenced framework.*

1. The Consultant shall carry out all the Services with all due diligence, care and in timely manner for monitoring the Contractor’s compliance with the work schedule throughout the construction period. In the event of any delays or deviations, the Consultant shall track the work schedule, ensure necessary revisions are made, and utilize appropriate project management software in this process. The Consultant shall regularly inform IPCU regarding the progress of the works, any deviations from the schedule, and the corrective measures taken. It is deemed that the Consultant familiarized himself with the nature of Project and is expected to take all sorts of precautions during the performance of Services to get the works completed by the Contractor on time.
2. In any case, all the correspondences received from the Contractor shall be reviewed evaluated and responded latest within one week. Prior to responding, the Client’s opinion shall be sought, and the Client shall be informed accordingly regarding the content and outcome of such correspondences. Any claim from the Contractor under the Construction Contract shall be evaluated by the Consultant and necessary recommendations shall be made the latest within one week as well.
3. The Consultants shall fully inform the Client about the cost and time impact and any other consequences of his any sort of proposals (such as revisions, recommendations, etc). The Client shall not be responsible from the consequences of the fact of which the Client is not informed in advance.
4. The Consultant shall check the Contractor’s valuations for payment on account and issue certificates according to the Conditions of Contract used and shall also be responsible for agreeing with the Client on each payment certificates in payable amount. The actual procedure and presentation of the certificates, supporting documents, etc. shall be discussed and agreed with the Client.

**3.1.1 Tests, Reports**

1. The Consultant shall approve the appropriate Material Testing Laboratory for all tests required that will be mentioned in Contractors’ Technical Specification and shall discuss the various testing requirements stipulated in its documents with personnel of the laboratory. The Consultant shall give at least 24 hours prior notice to the laboratory for all tests which are required to be undertaken. All samples shall be properly labeled in accordance with the requirements of the laboratory and the Consultant shall be responsible for the delivery of all samples for testing and for the collection of all test reports.
2. The involvement of the approved Materials Testing Laboratory is limited to the actual performance of the tests in accordance with the Consultant’s laid down procedures and/or the specified standards stated in the Contract. The Consultant shall be responsible for interpreting the results received, instructing the repetition or the carrying out of additional tests and taking whatever action necessary to ensure compliance with the contract requirements. The Laboratory staff may from time to time offer advice to the Consultant on any matter within the scope of their competence but it is up to the Consultant whether to accept or reject such advice or suggestion. If any advice or suggestion is accepted by the Consultants, they shall become completely responsible for it as if the advice or suggestion has been of its own initiative.
3. The Consultant shall stipulate the criteria, the planning and the procedure for all tests and inspections necessary for the materials, equipment, plant and workmanship and the commissioning of the Works and shall provide supervision and inspection for these tests. The Consultant shall compile a record of all such tests and compare the results with the specifications, standards or with the performance criteria that has been guaranteed by the suppliers or contractors.
4. Where necessary, tests and inspections may be carried out at the place of manufacture during fabrication and/or prior to shipment. The Consultants shall inform the Client well in advance about any such performance test foreseen, to enable the Client to participate in these tests if he so wishes.
5. The Consultant shall be responsible for the Contractor to achieve the minimum target performance levels of the equipment as defined in the “Construction Contract” or specifications of the related suppliers including the Medical Equipment until the Final Acceptance.

**3.1.2 Disputes**

The Consultant shall assist in the setting of all disputes or differences, which may arise between the Client and the Contractors, in a timely manner. In the case of litigation and arbitration, the Consultant shall assist the Client in the preparation of the documents needed by the Client.

**3.2 SPECIFIC TASKS OF THE CONSULTANT**

**3.2.1 Design Review**

1. The Consultant is obliged to check/review the designs of all buildings (Functionality, Economy, Accessibility, Sustainability) Base Isolation design, and the construction documents to ensure that they are adequate for obtaining building permits, competitive construction bids, and for executing the work.
2. The Consultant will verify the compliance of the designs, base isolation designs and construction documents with the most recent legislations and regulations.
3. The Consultant shall check the compatibility of Drawings, Technical Specifications, Unit Price Definitions and the Bill of Quantities.
4. The Consultant shall check that the materials described in the Drawings or Technical Specifications are not single source materials and suitable for the Project.
5. Specific requirements and specifications of Ministry of Health shall be considered and the designs shall be checked whether these criteria are reflected in the designs, together with the above-mentioned general and specific operational principles as well as specific cultural and sociological data of the region and Türkiye.
6. **Review of Design Accessibility:** Consultant shall check accessibility points to provide equal access to buildings for all people (permanent disabilities, elders, children, and people with temporary disabilities) according to requirements for handicapped people in accordance with Turkish Standard; TS 9111.

**3.2.2 Initiation of works**

1. The Consultant shall also sign the documents to be submitted for construction permit and assist the Client for the Construction Permit if not received yet.
2. The Consultant shall be responsible to check all the information required for accurate setting-out of the works and obtain additional information from the related authorities before the Contractor set out the Works and supervise all the setting- out studies by the Contractor. The boundaries of the available construction site shall also be compared with the project layout.

**3.2.3 Supervision during the Construction Period**

1. The Consultant shall supervise and oversee all aspects of the construction and installation of the various components of the works and engineering services to ensure strict compliance with the drawings and contract documents.
2. It is the duty of the Consultant to interpret the drawings and specifications and to consult with the Contractor as required to ensure compliance with the Contract Documents and the construction/installation program.
3. The Contractor may execute some works especially placement of concrete in night hours rather than daily hours because of traffic or other reasons like being not allowed by related authorities. In that case, Contractor will inform the Consultant 24 hours before the related work, Consultant will arrange his staff employment according to this condition without any cost to the Client and the Contractor.
4. The Consultant shall arrange weekly and monthly meetings with Contractor, inform the Client about progress of the work and activities, attend any meetings reasonably convened by the Client and provide any information or evidence reasonably required by the Client at any public meetings or inquiries that might be held in connection with the Project.
5. Preparation and submission of as-built drawings, shop drawings, operating and maintenance manuals for all items of equipment and plants incorporated in or associated with the works, shall be controlled and followed by the Consultant in timely manner. As-built drawings, operating and maintenance manuals should be obtained from the Contractor during the issuing of taking-over certificate. Otherwise, the Client might ask the Consultant for the conversion of the approved shop drawings into as-built drawings if Client considers that the Consultant is not strictly following up the work. The Consultant shall also prepare and submit to the Client’s approval a report giving all information about the “as-built-conditions” including (but not limited to) calculations, drawings, specifications, test reports and final cost analysis.
6. The main medical equipment will be supplied by the Ministry of Health and the related suppliers of these equipment will be responsible for the installation, testing and commissioning of these equipment as well as the provision of the manuals. The relevant equipment will be procured during the construction period and the exact specifications can be only provided prior to the start of the finishing works. The relevant general technical specifications (the size and arrangement of the rooms, connections, outlets, thermal loads, cable channels, X-ray shielding, etc.) are already covered in the designs but the detailed specifications for the final execution will be provided by the equipment providers through the Consultant prior to the start of the finishing works.
7. The coordination of the works between the Contractor and the equipment suppliers or any relevant third party shall be under the Consultants responsibility. The Consultant shall ensure the adequacy and completeness of the planning of the interfaces. The Consultant shall ensure that all aspects for a timely and cost-efficient execution are adequately considered and the Contractor provides proper assistance to the equipment suppliers.

The Consultant will be responsible for the documentation, testing, preparation of / issuing the Acceptance Certificate for this equipment.

The Consultant will also be responsible for the;

1. supervision of the large equipment installation that requires the adaptation of the location and/or technical installations (e.g. X-Ray, CT, MRT, sterilization, kitchens, etc.),
2. fixed / permanently installed equipment that needs to be considered in the designs and/or is permanently connected to the installations (e.g. surgical lights, ceiling or wall supply units, laboratory equipment, etc.),

After completion of the works and issuing of the Acceptance Certificate, the Consultant shall check the report which is to be prepared by the Contractor and submit to the Client. This report shall give all information about the equipment installed and tested including calculations, drawings, specifications, test reports and etc.

The Consultant shall submit this report together with operating and maintenance manuals for all items of equipment incorporated in the buildings as soon as possible after the Acceptance Certificates are issued in any case within 28 days of the date of these Certificates.

These reports and maintenance and operating manuals shall be subject to the Client’s approval. The format and number of copies shall be as stated in Section 6.

1. Some alterations in any of the Construction Drawings or Specifications might be necessary during the progress of the works because of new requirements or inadequate and improper design. The Consultant shall assist the Client for the coordination of the Designer or other relevant third parties with the Contractor for such revisions. The Consultant shall review and issue such alterations to the Contractor, in a timely manner, supported by the necessary calculations, details and, time and cost implications. The Consultant shall state whether the alterations will cause any delay in the work program, and therefore the Contractor to be entitled any time extension or not, supported by necessary documentation.
2. The Consultant shall review and approve Contractor’s and manufacturer’s drawings and where appropriate incorporate these drawings into the overall design and review alterations which might be requested by the Contractors during the course of Works.

**3.2.4 Supervision of LEED progress**

1. The Consultant shall organize periodic construction meetings, monitor LEED implementation and inform the related responsible of any problems for correction.
2. The Consultant shall provide LEED technical assistance to the Contractor.
3. The Consultant shall write the necessary plans (IAQ, Commissioning, etc.) and help the Contractor implement it.
4. The Consultant shall report the changes in design to US Green Building Council (USGBC) and revise the LEED Scorecard as necessary.
5. The Consultant shall prepare the construction related LEED documentation with related parties.
6. The Consultant shall provide all communication with USGBC during construction phase.
7. The Consultant shall submit to USGBC all review documents.
8. The Consultant shall respond to all clarification request that may come from USGBC, prepare and send related supporting documentation for review.

**3.2.4.1 LEED Commissioning Coordination**

1. The Consultant shall prepare necessary documentation for LEED Certification Fundamental Commissioning prerequisite and organize the jobsite personnel.
2. The Consultant shall identify the systems to be commissioned.
3. The Consultant shall train the Contractor personnel and related subcontractors on Commissioning and field-testing protocols.
4. The Consultant shall gather the required documentation for commissioning and substantial completion of energy consuming systems.
5. The Consultant shall develop the final Commissioning submittals for LEED Certification

**3.2.4.2 Environmental Site Assessment**

1. The Consultant shall conduct a Phase I Environmental Site Assessment according to the ASTM E1527-05 standard and report the findings.

**3.2.4.3 Final LEED Certification Plaque**

1. The Consultant shall deliver the LEED Certification Plaque at the end of the Project to the Client.

**3.3 Supervision During The Commissioning, Defects Liability And Maintenance Period**

1. The Consultant shall continue to be responsible for the supervision and inspection of the construction and completion of the Works during the Defects Liability Period as defined in the construction contracts. The level of supervision shall be appropriate to the scale of the works being carried out. These inspections and supervision are to ensure that works, agreed to be carried out during the Defects Liability Period, are properly carried out and have been completed and that any failure of any part of the Works has been rectified. If any defect is discovered, during this period, the Consultant shall promptly investigate the reason for it, report to the Client and take required actions to rectify the defect.
2. A report of these inspections shall be submitted to the Client, which shall include all details of any defects, faults, accidents or breakdowns, which have occurred together with the estimated costs of repair and the time scales within which they will be completed. Moreover, the Consultant shall submit quarterly report summarizing all the activities during subject quarter of Defects Liability. A final report shall be submitted at the end of the Defects Liability Period giving full details of all works carried out during that period. This report shall be submitted by the Consultant to the Client at least 30 days prior to the Consultant’s issuing Defects Liability Certificate for the completed Works. The Consultant will provide minimum number of technical staff acceptable to the Client during the Defects Liability Period. Defects are expected to be minimum for a competent Consultant Firm during defects liability period. Therefore, consultant should consider minimum number of staff assigned in DLP consisting of technicians.

**4. PROJECT MANAGEMENT PLATFORM**

As part of the consultancy services, the selected firm will be required to utilize a cloud-based Project Management Platform that meets the following specifications:

1. The platform will handle project documentation, contracts, and project management processes. The Supervisory Consultant must use this platform throughout the project.
2. The Supervisory Consultant will procure 10 user licenses for its personnel and IPCU after contract signing.

License Costs will be covered by the Supervisory Consultant at 1 year. After the main contractor starts, all license costs (including renewals) are covered by the main contractor.

1. The Supervisory Consultant will fully operationalize the system. Upon contractor selection, licenses and platform usage will be transferred for shared access. The system must be scalable for contractor and subcontractor needs. After the main contractor contract is signed, they assume full responsibility for all licenses.
2. The Supervisory Consultant will coordinate training, provided by the platform supplier.Training includes system setup, functionality, and operations, with repeat sessions if needed.
3. The Supervisory Consultant will install and manage the platform, ensuring compliance with IPCU’s reporting and data requirements.
4. At project completion, all system data, licenses, and documentation will be transferred to IPCU.
5. Technical Requirements

The platform must be a secure, cloud-based system hosted in ISO 27001-certified data centers in Türkiye, supporting BIM (ISO 19650), document management, collaboration, planning, cost control, and business intelligence. It should integrate with Primavera P6, Microsoft Project, MS Office, ACC, and GIS, provide multi-language support (Turkish & English), enable real-time reporting and task management, and ensure version control, security compliance, and scalability for design, progress tracking, quality control, and approvals. The system must have been used in at least two public projects in Türkiye or be operational for over one year.

**5. TIME SCHEDULE & CONSULTANT’S INPUTS**

During the supervision periods, it should be noted by the Consultant that any schedule, report, specification and other document submitted to the Client for approval will be reviewed by the Client and approved or returned for revision and/or resubmission in 15 calendar days.

The Consultant shall submit all the documents in a timely manner to complete the services on time without any delay. Time schedule for the completion of the consultants’ services for the various parts of the work as mentioned below shall be submitted to the Client.

All other activities shall be completed within 5 years (including the Defects Liability Period) from the consultancy contract signing date.

Table 1: Time Schedule

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Months** | **R1** | **R2** | **R3** | **1** | **….** | **30** | **31** | **….** | **36** | **37** | **….** | **48** | **DLP 1** | **….** | **DLP 12** |
| Design Review |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Construction Supervision |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Completion Works (Acceptance, DLP etc.) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

\* Months are from the start of assignment

* **Supervision of Construction and Engineering Services and Defects Liability**

Under normal conditions, the scheduled construction period is 60 (sixty) months. (including the defects liability period which is 12 (twelve) months)

The estimated number of staff-months required for the assignment is **1.020 staff-months.**

Correspondingly, 900 staff/months (approximately 870 staff/months for design review & construction supervision and 30 staff/months for Defects Liability Period) is estimated for the key staff and 120 technician/junior engineers is estimated as support staff. (inc. DLP). (**Excluding** surveyors, clerks, typists, draftsmen, drivers etc.)

Since this is just an indicative value, the Consultants shall estimate and propose the number of key professional staff months and support staff months that are necessary for the various components and for various phases of the Project. If the staff-months are not given in the Technical Proposal, the Consultant’s Proposal may be considered non-responsive.

The table including key staff titles, minimum required experiences and qualifications is given below.

Table 2: Required Key Staff

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **KEY STAFF** | **TOTAL ESTIMATED STAFF-MONTHS** | **PROFESSIONAL EXPERIENCE (YEARS)** | **SPECIFIC EXPERIENCE ON THE RELATED ASSIGNMENT**  **(YEARS)** | |
| **For Design Review** | | | | |
| **Sub Total** | **12** |  |  | |
| **For Construction Supervision at Project Management Office** | | | | |
| Project Manager   * Experience in at least one LEED certified Hospital Construction Project equipped with Seismic Base Isolation System * Experienced in FIDIC type of contracts * Fluent English Level (preferably certified) | 48 | >15 years | | >8 years | |
| Structural Engineer (part-time) | 10 | >10 years | | *M.Sc. in Structural/Seismic Eng. with site experience in supervision of preferably base isolated building of at least 1 building* | |
| Environmental Engineer | 48 | >8 years | | >3 years | |
| Occupational Health and Safety Specialist | 48 | This staff will be employed as per the Law 6331 published for Health and Safety regulations and having Class B Certificate | | | |
| **Sub Total** | **154** |  |  | |
| **For Construction Supervision at Site** | | | | |
| Deputy Project Manager (1)   * Project Management Supervision Experience in at least one Hospital Construction Project equipped with Seismic Base Isolation System and preferably LEED certified * Experienced in FIDIC type of contracts * Fluent English Level (preferably certified) * Civil Engineer or Architect | 48 | >10 years | >5 years | |
| Chief Civil Engineer  • Experienced in at least 50.000 m2 superstructure concrete works in one construction contract.  • BIM Experience (preferably) | 48 | >10 years | >5 years | |
| Civil Engineer | 36 | >8 years | >2 years | |
| Chief Mechanical Engineer  • Supervision Experience in at least One Hospital Construction Project  • BIM Experience (preferably) | 48 | >10 years | >5 years | |
| Mechanical Engineer | 36 | >8 years | >2 years | |
| Chief Electrical Engineer  • Supervision Experience in at least One Hospital Construction Project  • BIM Experience (preferably) | 48 | >10 years | >5 years | |
| Electrical Engineer | 36 | >8 years | >2 years | |
| Chief Architect  • Supervision Experience in at least One Hospital Construction Project  • BIM Experience (preferably) | 48 | >10 years | >5 years | |
| Architect | 36 | >8 years | >2 years | |
| Electronic & Automation Engineer  • Supervision Experience in at least One Hospital Construction Project | 30 | >8 years | >3 years | |
| Chief Cost Engineer  • Supervision Experience in at least One Hospital Construction Project | 48 | >10 years | >5 years | |
| Chief Planning Engineer  • Supervision Experience in at least One Hospital Construction Project with PM Software (Primavera, Asta, MS Project)  • BIM Experience | 48 | >10 years | >5 years | |
| QA/QC Engineer | 48 | >10 years | >5 years | |
| Topographic Engineer | 48 | >8 years | >3 years | |
| Geotechnical Engineer (Part Time) | 8 | >8 years | >3 years | |
| Landscape Architect (Part Time) | 12 | >8 years | >3 years | |
| FIDIC Expert (Part Time) | 12 | >10 years | >5 years | |
| Sustainable Design and LEED Expert  • Proposed personnel shall have and submit LEED AP (Accredited Professional) certificate. (Part Time) | 24 | >8 years | >3 years | |
| Façade Expert (Part Time) | 6 | >8 years | >3 years | |
| Medical Expert (Part Time) | 6 | >8 years | >3 years | |
| Social Expert (Part Time) | 24 | >8 years | >3 years | |
| Fire Expert (Part Time) | 6 | >8 years | >3 years | |
| **Sub Total** | **(704)** |  |  | |
| **For Construction Supervision of Defects Liability Period** | | | | |
| **Sub Total** | **30**(\*) |  |  | |
| **TOTAL ESTIMATED KEY STAFF-MONTHS** | **900** |  |  | |
| **TOTAL ESTIMATED TECHNICIAN/JUNIOR ENGINEER STAFF-MONTHS (inc. DLP)** | **120** |  |  | |
| * **Minimum Support Staff Requirement:**   Except from the key staff, in order to ensure proper supervision,   * + **Technician/Junior Engineer** will not be evaluated as key staff. The CV’s of these staff will be submitted to IPCU for approval after contract award.   + Following the contract award, the proposed Technicians shall be experienced for at least 6 (six) years or the proposed Junior Engineers shall be experienced for at least 4 (four) years in their respective fields.   + Support staff for the administration services shall be proposed additionally as required (surveyors, clerks, drivers, secretary etc.) * **Defects Liability Period Staff Requirement**   + Staff-months for DLP shall be proposed as well, and demonstrated in form … Staffing Schedule.   + (\*) The Consultant team shall be composed of key staff. | | | | |

**6. CHANGE IN THE SCOPE OF CONSULTANT’S SERVICES**

* The Construction commencement dates of Work may vary due to the unexpected reasons. The Consultant shall wait for the finalization of the tender evaluation and startup of the construction works and shall not request any payment or compensation.
* If the Construction Contract is not tendered or is not awarded by the Client, the Client may decide:

1. to cancel the remaining services of the Consultant The remaining payments will not be done to the Consultants and the Consultants shall not request any payment or compensation for the cancelled parts of the Services.
2. in agreement with the Consultants; to suspend the remaining services of the Consultants until awarding of Construction Contract. In such case the Consultants shall not be paid by the Client during the period between suspension and start up date of the Construction Contract, and the Consultants shall not request any payment for compensation for the duration mentioned above.

**7. SUBMISSION OF THE REPORTS, DRAWINGS AND DOCUMENTS**

**Monthly Reports**

The Consultant shall prepare and submit to the Client each calendar month a report satisfactory to the Client, including progress charts and photographs in color giving all information regarding the progress of the Works, actual extent and nature of the Works completed as well as details of any delay in the works, reason and remedial of the delay, any other problems relating to the Works and substantiating documentation if required. The Consultants shall also clearly indicate in the report whether the delay (if any) of any part of the Works will cause any delay in the completion of the whole Works.

The report shall include the percentages of the Work items completed and planned, and also the actual and planned cash-flows for each work item as of the reporting period prepared in the project planning tools (such as Primavera, Asta etc.) accepted by the IPCU.

The report shall also include records of materials, equipment and plant tested with copies of the test results and, statistical evaluation of the test results in table or graphical form. Action taken with regard to poor results shall be stated.

The report shall give a detailed review of the Works to be performed during the following month and a general listing of the works to be performed during the following two months.

The report shall also give information about personnel employment status of the Consultants.

The report shall also include environmental management practices followed for mitigation of environmental impacts of the works.

The report shall also include the LEED certification progress with the site implementation plans (Waste Management, IAQ, Commissioning, etc.) and the LEED Construction Review Submittals.

The report shall be submitted to the Client by the tenth day of following month. Any comment by the Client on the report shall be reviewed and the report shall be modified and re-submitted to the Client within a week.

Due to the urgent nature of the project and short construction time, the Consultants shall also prepare a report in table form showing summary of cumulative progress in main work activities on weekly basis. The report shall be submitted to the Client in an acceptable format on Monday of each week via electronic mail and as hard copy. The weekly report shall also be e-mailed to Client.

In addition, the Consultants shall record views from at least 5 different points for the construction site, on weekly base, showing the progress on the site with dates and record them with acceptable format on CD and submit to the Client.

The requirements for the submission of reports, drawings and other documentation are given below. Reports shall be prepared in both the Turkish and English languages. The metric system of weights and measures shall be used.

Submission shall be as follows:

1. General

Format of Reports : A4 or A3, including where appropriate drawings

reduced to A3 size.

Format of Drawings : A1 and/or A0 size.

A draft copy of all reports shall firstly be submitted to the Client for discussion purposes following which the Consultants shall be required to prepare the final copy, incorporating any amendments arising from such discussions.

CD-ROM

Turkish English (for English

and Turkish)

1. Design Review Stage

Number of copies of Design Review Report 1 1 1

(Hard copy)

1. Construction Supervision Stage

Number of copies of Weekly Report (Hard copy) 1 1 1

Number of copies of Monthly Report 2 2 1

Number of copies of Quarterly Report 2 2 1

1. Completion and Defects Liability/Warranty Stage

Number of copies of Operating and

Equipment Reports, Maintenance Manuals 2 1 1

Number of copies of Quarterly Report 2 2 1

Number of copies of Complete sets of

as-built drawings 1 1 1

Number of copies of Taking-Over Report(s) 1 1 1

Number of copies of

Defects Liability Period Report(s) 2 2 2

Original of the drawings that shall be submitted to the Client are not included in the above number of copies.

Those of the documents and reports not mentioned above but either specified or implied in the contract related to the Construction Supervision Stage and Completion and Defects Liability Period shall be submitted in 3 copies in Turkish and English languages each.

In relation to the ongoing stages of the Consultants Services, the submission requirements given above should be allowed by the Consultants as a guideline for the extent and type of documentation that will be required by the Client during the performance of the Services. However, the Consultants shall allow in its fee for the submission of all reports, drawings, documents, etc. either specifically requested in these Terms of Reference or those that may be implied there from and the Contractors’ contracts. The Client may however vary such requirements during the course of the Services to be performed.

Should additional copies be required extra over to those stated above or to be implied from these Terms of Reference, these shall be supplied by the Consultant(s) at the cost of reproduction of such documents, reports or drawing. Additionally, after finalizing the reports and “as built” drawings, these shall be submitted to the Client on one (1) set of CD and in the software format acceptable by the Client. Each copy shall be durably bound in a volume or volumes depending on bulk, and the transparent copies shall have a suitable protective cover/box. All copies shall be labeled in accordance with the needs of the Client.

Upon the completion of Works, the Consultants shall submit all the original copies of correspondences, documents, test results, drawings etc., relating to the Services and Works, to the Client together with indices in acceptable files and forms by the Client.

**8. SUPPORT TO BE PROVIDED BY THE CLIENT TO THE CONSULTANTS**

The inputs (contract drawings, Bill of Quantities, tender documents, etc.) shall be provided free of charge by the Client to the Consultants. Consultant shall return all such drawings and documents received to the Client upon the completion of services.

The Civil Works Contractors’ bidding documents shall be arranged to incorporate clauses to provide temporary office area to the Consultants at the construction site depending on the size and location of the construction site, the size and number of rooms shall be jointly determined by the Client and the Consultant considering the needs of the Client as well. However, these will be constructed by the Contractors and will take some time. The Consultants will be fully responsible for providing their central office in İstanbul until the contractors are in place to make these site offices available. The central office shall be furnished and equipped by the Consultants as per clause … of SCC of Standard Forms of Contract, whereas the site offices shall be furnished by the Contractor. All sort of running expenses except water and electricity (to be provided by the contractor) shall be under the Consultant’s responsibility. The Consultant shall not be required to deliver any equipment and materials provided by the reimbursable expenses and which have been used for the Services to the Client.

All local transport for the Consultants staff including the site supervisory staff shall be provided by the consultant and shall be included in the fee proposal submitted.

Subject to availability to Client the following items shall be provided free of charge by the Client to the Consultants if available: The existing maps, topographic plans, development plans, cadastral data, layouts.

In addition, the Client shall, where possible, assist the Consultants in obtaining approvals, permissions from the Municipalities and other State Authorities in respect of the Services to be performed.

The Consultants shall return to the Client all documents received from the Client following the completion of the Services to be performed.